REMARKS

Claims 1-18 are in this application and are presented for reconsideration. By this Amendment, Applicant has amended claims 1 to clarify the text. The change makes it clear that the joining tool is at the joining station. The claim as previously presented does state this, but is believed that the clarification places the application in better form. This issue has been presented previously. Each of the independent claims requires a robot attached movable joining tool, with claims 15 and 17 highlighting the particular welding type of joining tool.

Each of the independent claims of the application highlights the provision of a turning station which has two turning units, each a multi-axial device with gripping tools. Each of the turning units has a range of operation or a working area in which the gripping tool can be moved. These working areas intersect each other at two particular locations. At each of these locations there is a workstation. One of the workstations is a workpiece support. The other workstation is a joining station. Still another robot (a multiaxial device) is provided as part of the machining station. The robot has a joining tool which is operative in the joining station (positionable in the joining station for use). As such, three different robots or multiaxial units have an operation region which overlaps. In other words, one of the two points of intersecting action of the turning units is also a point of intersection of action of the robot with the joining tool.

Applicant's specification and claims support the use of the term "joining tool" as a device for joining workpieces, namely fusing or making integral two previously separate work pieces. The joining tool particularly referenced (see particular claims 15 and 17) is a welding

tool. However, other joining tools are known, including joining tools for adhering pieces together and other similar joining operations. It is Applicant's position that the term is clear as not encompassing a gripping tool, namely a device for holding a workpiece and moving it from one location to another, or for holding a workpiece while joining or welding takes place. It appears that this distinction is not fully considered in the final rejections. Nevertheless, as detailed below, gripping robots do not provide a joining function and therefore should not be considered to have joining tools. Further, Applicant has presented claims which are more particular to the type of joining tool (namely a welding tool) and these claims have been rejected even though the prior art as a whole fails to teach and fails to suggest the combination of features claimed. Applicant therefore requests consideration of the following further comments with regard to the final rejections. Further, it is requested that Applicant's representative be given the opportunity to briefly discuss the prior art, claims and the invention during a telephonic interview with the Examiner.

Claims 1, 2 and 15-18 have been rejected under 35 U.S.C. 102(b) as being anticipated by Pinchon (FR 2712833 A).

Pinchon discloses an assembly line comprising a succession of posts (or work locations) 17, 21, 24. Handling robots 9, 10, 11, 12, 13, 14, 15, 16 are located between each post for ensuring displacement of the subassembly during the course of assembly from one post to another. Pinchon discloses robots that read and transport workpieces from one location to another for working on the workpieces. However, there is no robot or multiaxial device that is connected to a joining tool. The welding features taught by Pinchon are stationary. Although

three transport robots appear to have overlapping regions of operation, there is no suggestion of providing two different multiaxial units which have ranges of operation and overlap at two different workstations with a robot with a joining tool having an operation range in the region of the overlap (at one of the workstations). As such, Pinchon clearly fails to teach and clearly fails to suggest the combination of features of claim 1. Further, this relationship in claims 15 and 17 include the particulars of the welding robot with welding tool with the work area of the welding robot overlapping the working area of each turning unit. Pinchon clearly fails to teach a welding robot as claimed, with a movable welding tool and most clearly fails to teach this in combination with turning units having working areas that overlap the welding tool working area. The relationship between a first multiaxial turning unit with gripping tool, a second multiaxial turning unit with gripping tool and welding robot with welding tool is particularly highlighted in claim 17. This combination of features is clearly neither taught nor suggested by Pinchon. Again, Pinchon teaches stationary welding locations. Pinchon only teaches various transport robots with overlapping ranges of operation. Accordingly, reconsideration of the rejection based on Pinchon is requested.

Claims 1, 2 and 5-18 have been rejected under 35 U.S.C. 102(b) as being anticipated by Kaczmarek et al. (US 5,152,050).

Kaczmarek et al. discloses a carrier 14 with a carrier path and a predetermined series of stations. The carrier advances the workpiece. Two work stations are provided at different locations along the assembly line. One work station is welding station 50 and the other work station is an underbody welding station 62.

Kaczmarek et al. fails to teach or suggest the combination of turning stations having working areas that intersect each other at two work stations. Kaczmarek et al. fails to teach or suggest providing two different multiaxial units which have ranges of operation and overlap at two different workstations with a robot with a joining tool having an operation range in the region of the overlap (at one of the workstations). As such, Kaczmarek et al. clearly fails to teach and clearly fails to suggest the combination of features of claim 1. Kaczmarek et al. clearly fails to teach and clearly fails to suggest that the combination of features of independent claims 15 and 17. Accordingly, Applicant respectfully requests that the Examiner favorably consider claims 1, 15 and 17 and all claims that respectively depend thereon.

Claims 1-3, 7, 9 and 11-18 have been rejected under 35 U.S.C. 102(e) as being anticipated by Laurino (US 2003/0183361 A1).

Laurino discloses an automated casting system. The casting system comprises a plurality of casting stations A, B, C, D aligned along an axis defined as a longitudinal axis and arranged side-by-side in pairs. In each casting station there is a casting machine 10a, 10b, 10c, 10d. A table 20 is disposed between the pairs of casting stations A, B and C, D that is rotatable about a vertical axis by means of a geared motor. An apparatus 30 transfers liquid metal from a furnace which is in the collection position E on the rotary table 20 to the individual casting machines 10a-10d. A robot transfers the castings from the casting positions A-D to a discharge station F. A carriage 42 slides along a guide 41 and carries a robotic gripping device 43 for collecting the castings from the machines 10a-10d. The robotic gripping device 43 performs combined rotational and translational movement along and about seven geometrical axes.

As with the other references, Laurino does not present teachings and does not present suggestions regarding providing a robot with a joining tool, particularly a welding tool. Laurino fails to teach or suggest the combination of turning stations having working areas that intersect each other at work stations. Laurino fails to teach or suggest providing two different multiaxial units which have ranges of operation and overlap at two different workstations with a robot with a joining tool having an operation range in the region of the overlap (at one of the workstations). As such, Laurino fails to teach and Laurino fails to suggest the combination of features of claim 1. Laurino fails to teach and fails to suggest the combination of features of independent claims 15 and 17. Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1, 15 and 17 and all claims that respectively depend thereon.

Claims 1, 2, 7-9, 11, 12 and 14-18 have been rejected under 35 U.S.C. 102(e) as being anticipated by Angel (US 2002/0134815 A1).

Angel discloses an apparatus 10 for the manufacturing of parts 12 by a plurality of robots 14 positioned on a turntable 16 for rotation about an axis 18. The robots 14 are positioned at different locations based along the outer periphery of the turntable 16. There are an equal number of robots 14 to the number of workstations 20 positioned around the periphery of the turntable 16. The turntable 16 has eight robots 14a-14f disposed at evenly spaced angular positions around the outer peripheral edge of the turntable 16. The robots 14a-14f are independently movable with respect to one another and are movable independent of movement of the turntable 16. Robot 14a is positioned at workstation 20a for unloading parts that have been processed. After unloading a part, the turntable 16 is rotated about the axis 18 to position

the robot 14a at the position previously occupied by robot 14b. In this position the robot has access to a tool change work station 20b to change the tooling as required for the particular parts be processed next. The turntable 16 is rotated again about the axis 18 to move the robot 14a to the position once occupied by robot 14c. When in this position the robot picks a part to be processed at the part loading fixtures 22 at workstation 20c. The turntable 16 is rotated about the axis 18 to bring the robot 14a into the position previously held by robot 14d corresponding to workstation 20d. The robot 14a then positions part 12 into the fixtures 22d. The processing can include assembly and/or welding by additional robots 24a-24d disposed at workstation 20d.

Angel fails to teach or suggest a turning station having at least two multiaxially movable turning units with movable turning units working areas, which intersect each other at two work stations and with a robot with a joining tool having an operation range in the region of the overlap (at one of the workstations). As such, Angel fails to teach and Angel fails to suggest the combination of features of claim 1. Angel fails to teach and fails to suggest the combination with the joining tool being a welding tool (independent claims 15 and 17). Accordingly, Applicant respectfully requests that the Examiner favorably consider claim 1, 15 and 17 and all claims that respectively depend thereon.

Claim 4 has been rejected under 35 U.S.C. 103(a) as unpatentable over Kaczmarek et al.

Although Kaczmarek et al. teaches an assembly system, the references as a whole as previously discussed above fail to suggest the combination of features claimed. Specifically,

Kaczmarek et al. fails to teach turning stations having working areas that intersect each other at work stations. The references do not suggest the invention and therefore all claims define over the prior art as a whole.

Claim 4 has been rejected under 35 U.S.C. 103(a) as unpatentable over Angel. Although Angel teaches a robotic turntable, the references as a whole as previously discussed above fail to suggest the combination of features claimed. Specifically, Angel fails to disclose the combination of robots having working ranges that overlap at two locations. The references do not suggest the invention and therefore all claims define over the prior art as a whole.

Is Applicant's position that the combination of features presented in each of the independent claims is novel. Further, the combination provides manufacturing flexibility which is not attained by the prior art. The advantages directly relate to the claimed joining tool, and more particularly a welding tool that has an operation range which intersects each of two tool movement ranges, respectively of two multiaxial devices. This allows for particular operations with regard to joining of workpieces wherein the use of multiaxial turning units allows for significantly enhanced flexibility during operation with great adaptability to the particular joining operation to be conducted at the joining workstation. The two turning units can be uncoupled from each other functionally and allow multiple tasks as compared to prior art arrangements that rely on turntables, such as taught by Angel. Accordingly, it is believed that allowable claims have been presented and favorable consideration is requested.

Further and favorable action on the merits is requested.

Respectfully submitted
for Applicant,

By:_____
John James McGlew
Registration No. 31,903
McGLEW AND TUTTLE, P.C.

- and -

By:_____
Brian M. Duncan
Registration No. 58,505
McGLEW AND TUTTLE, P.C.

JJM:BMD
71613-13

DATED: August 3, 2007
BOX 9227 SCARBOROUGH STATION
SCARBOROUGH, NEW YORK 10510-9227
(914) 941-5600

SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.